Testing Circus

Volume 1 - Issue 1 – September 2010

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Your Monthly Magazine on Basics of Software Testing

Testing Circus

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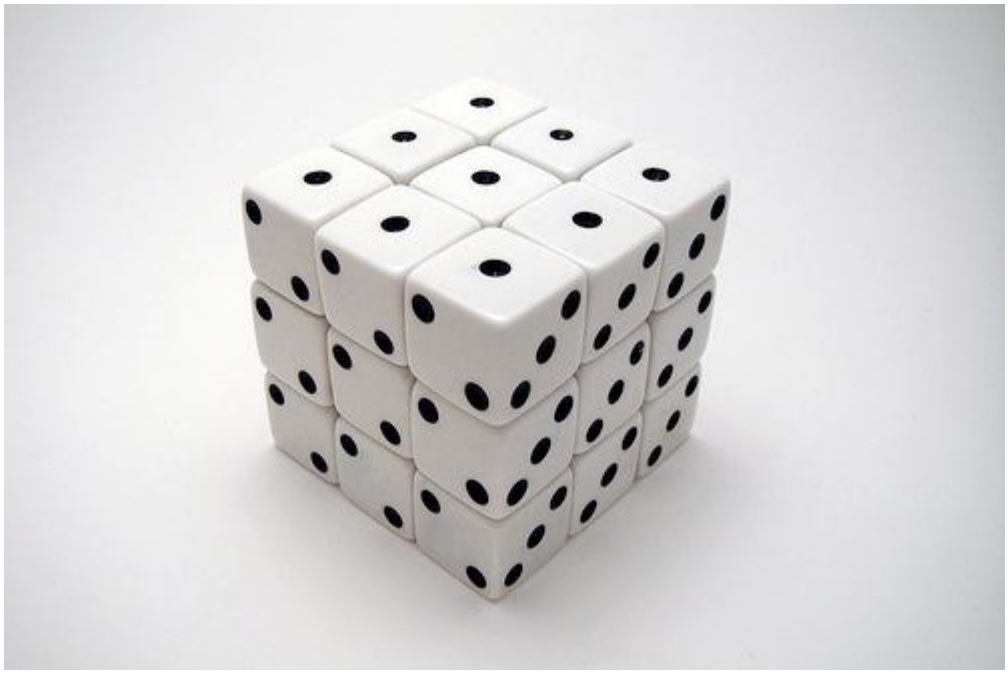
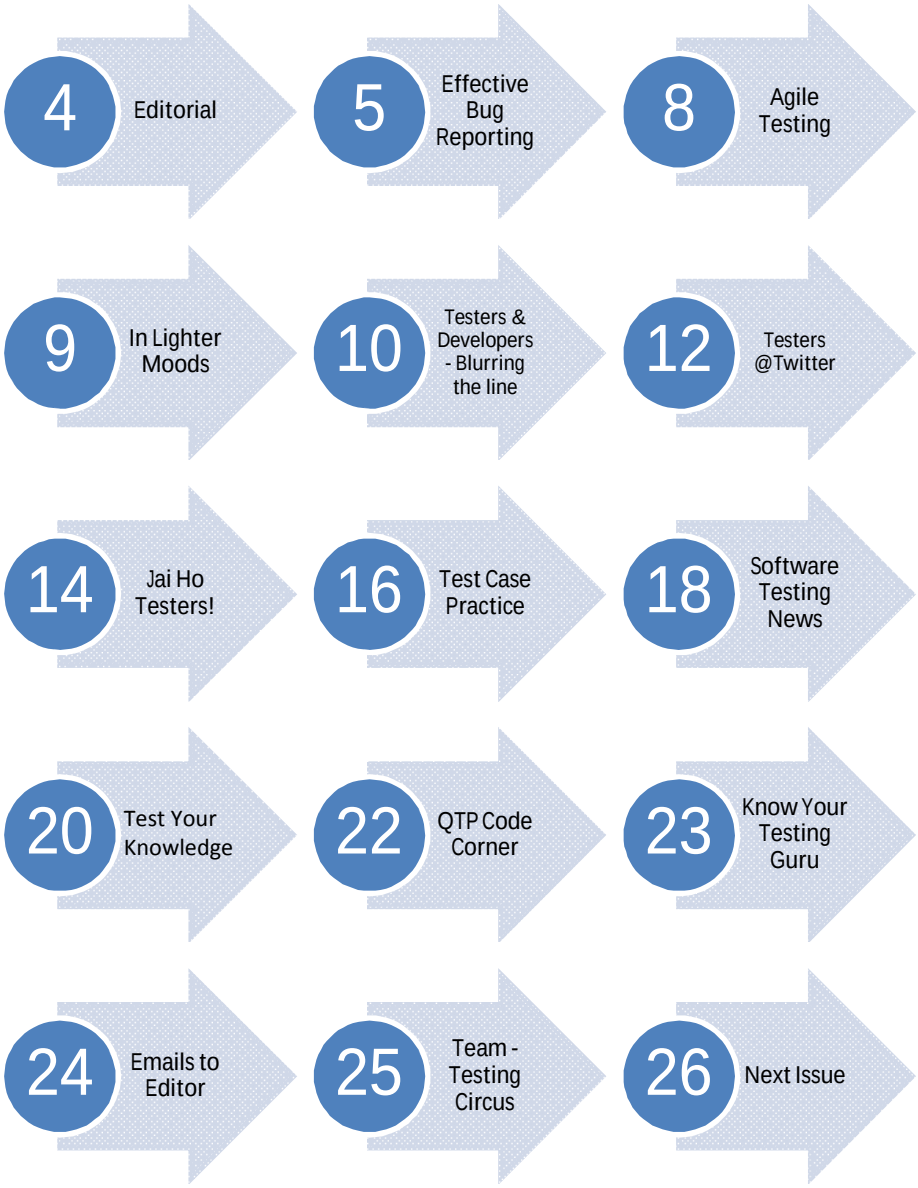


Puzzle for testers. Why is this page intentionally left blank?

Send your answers to editor@testingcircus.com

*Where is what?



From Editor's Keyboard

Welcome to the 1st Issue of Testing Circus.

What a name! Testing Circus. Somebody would say this is not a good name for a serious venture. The word circus is generally associated with something chaotic, funny. But we finalised on this name as this would mean tricks. Circus is performed by well trained professionals and they display their skills and tricks without any hidden magic.

By publishing this e-magazine on software testing we would like to cater the needs of people who are still new into the profession or those who want to learn software testing. There are lots of books and magazine already available on software testing but those are of pedantic in content. Testing Circus will focus on the grass root level of software testing tricks.

We would like to give this e-magazine free of cost. This means the people who are working behind this initiative are working without expecting any monetary benefit. By doing so we believe we are giving back to the society of software testers. We are known today because of software testing and we would like to contribute to it back.

We have just started it overnight. We don't have very good graphic and layout designers. Our website does not have a good look. Simply, we don't have enough resources to cater those needs. Also we don't want to complicate things. We will, for now, use Microsoft office software and Acrobat Reader to publish our e-magazine. We are thankful to Microsoft and Adobe for this.

We would like to thank all our contributors and mentors for helping us publish this magazine. Special thanks to Mr. Vipul Kocher for encouraging and guiding us at various point of time. Thanks to our subscribers for subscribing our magazine.

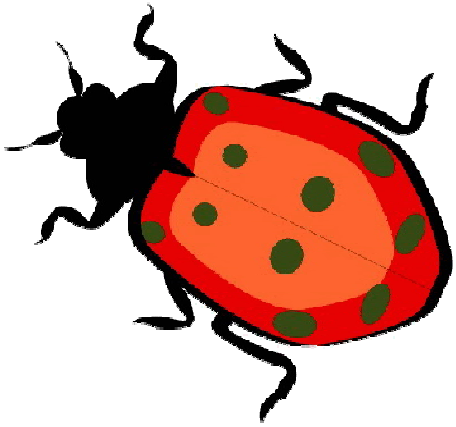
Please forward, share, debate, criticize our work. We love your feedbacks. Logging off for now. Come, let us celebrate the 1st issue of Testing Circus.

~Ajoy Kumar Singha

Effective Bug Reporting and Tracking

By **Kumar Gaurav**

What is a Bug Tracking system?



Bug tracking system is a system for reporting and tracking bugs reported against a software application or project. A bug tracking tool can be very useful in collecting information about number of bugs reported, open or fixed at a given point of time.

Some well known Bug tracking tools available in the market are Bugzilla, JIRA, Mantis, Clear Quest etc. Quality Center has the in-built capability of bug tracking.

Why good bug reports are a part of software testing project?

If your bug report is effective, chances are higher that it will get fixed. So fixing a bug depends on how effectively you report it. Reporting a bug is nothing but a skill and a good tester must possess this skill.

The point of writing problem report (bug report) is to get bugs fixed

If a tester is not reporting a bug correctly, programmer will most likely reject this bug stating as irreproducible. This can hurt tester's moral and hence productivity.

What makes a good software bug report?

Anyone can write a bug report. But not everyone can write an effective bug report. You should be able to distinguish between average bug report and a good bug report. So how do we distinguish a good or bad bug report? The following are the characteristics and techniques to write a good bug report -

- Be precise
- Be clear - explain the steps to reproduce the bug
- Give all evidence and explain in clear language
- No bug is too trivial to report - small bugs may hide big bugs
- Attach proofs for the bug - logs, screenshots etc

Pre-conditions

1. Try to reproduce your bug using a recent build of the software, to see whether it has already been fixed.
2. Make sure that is not already reported and it is not a duplicate bug.
3. Know the exact requirement before logging the bug
4. Do not report just to increase the count. Try to report genuine bugs.

Reporting a New Bug

If you have reproduced the bug in a recent build and no-one else appears to have reported it, then:

1. Choose "Enter a new bug" option.
2. Select the product in which you have found the bug
3. Fill out the form in the bug tracking tool. Here is some help understanding it:

Component: In which sub-part of the software does it exist?

OS: On which operating system (OS) did you find it? (e.g. Windows 7, Solaris 10, Red Hat Linux, Mac OS)

Priority: How soon the bug should be fixed? Priority is generally set from P1 to P5. P1 as "fix the bug with highest priority" and P5 as "Fix when time permits".

Severity: This describes the impact of the bug on the software.

Types of Severity:

- **Blocker:** No further testing work can be done.
- **Critical:** Application crash, Loss of data.
- **Major:** Major loss of function.
- **Minor:** minor loss of function.
- **Trivial:** Some UI enhancements.
- **Enhancement:** Request for new feature or some enhancement in existing one.

Status: When you are logging the bug in any bug tracking system then by default the bug status is 'New'. Later on bug goes through various stages like Open, Fixed, Verified, Reopen, Won't Fix etc.

Kumar Gaurav is a Senior QA Engineer currently working in PineLabs, Noida.

He has 3.3 yrs of experience and started his career as a software tester in HCL Technologies Ltd. His hobby includes reading about latest development in the software testing area.

He wants to share his knowledge about software testing through Testing Circus e-magazine.

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Assign To: If you know which developer is responsible for that particular module in which bug occurred, then you can specify user id or email id of that developer. Else keep it blank this will assign bug to module owner or Manger will assign bug to developer.

Summary: How would you describe the bug, in one liner? A good summary should quickly and uniquely identify a bug report. It should explain the problem, not your suggested solution.

- Good: "Cancelling a File Copy dialog crashes File Manager"
- Bad: "Software crashes"
- Very Bad: "Browser should work with my web site"

Description and Steps to Reproduce: Write about the bug in detail now. Give clear steps to reproduce the bug.

Expected Results: Write about what the application was supposed to do or behave actually according to requirements given by client.

Attachment: Attach all relevant files, reports, logs, screenshots, and images to give proof of the bug. Make sure that you don't attach very heavy files. Attach compressed files if possible.

The conclusion: The bug report is an integral part of software testers. Practicing to write a good bug report and tracking the bug to give a conclusive end is one of the main skills of a software tester. Effectively used, a bug reporting tool can become a good decision making tool for management on the health of the software project.

We found this on the Net

Agile Testing

Agile testing is a software testing practice that follows the principles of the agile manifesto, emphasizing testing from the perspective of customers who will utilize the system. Agile testing does not emphasize rigidly defined testing procedures, but rather focuses on testing iteratively against newly developed code until quality is achieved from an end customer's perspective. In other words, the emphasis is shifted from "testers as quality police" to something more like "entire project team working toward demonstrable quality."

The Word Agile means "Moving Quickly" and this explains the whole concept of Agile Testing. Testers have to adapt to rapid deployment cycles and changes in testing patterns.

Agile testing involves testing from the customer perspective as early as possible, testing early and often as code becomes available and stable enough from module/unit level testing.

Since working increments of the software are released often in agile software development, there is also a need to test often. This is commonly done by using automated acceptance testing to minimize the amount of manual labour involved. Undertaking only manual testing in agile development may result in either buggy software or slipping schedules, as it may not be possible to test the entire build manually before each release.

In Agile Testing, testers are no longer a form of Quality Police. Testing moves the project forward leading to new strategy called Test Driven Development. Testers provide information, feedback and suggestions rather than being last phase of defense.

Testing is no more a phase; it integrates closely with Development. Continuous testing is the only way to ensure continuous progress.

Reduce feedback loops, Manual regression tests take longer to execute and, because a resource must be available, may not begin immediately. Feedback time can increase to days or weeks. Manual testing, particularly manual exploratory testing, is still important. However, Agile teams typically find that the fast feedback afforded by

automated regression is a key to detecting problems quickly, thus reducing risk and rework.

Keep the code clean. Buggy software is hard to test, harder to modify and slows everything down. Keep the code clean and help fix the bugs fast.

Lightweight Documentation Instead of writing verbose, comprehensive test documentation.

Agile testers:

- Use reusable checklists to suggest tests
- Focus on the essence of the test rather than the incidental details
- Use lightweight documentation styles/tools
- Capturing test ideas in charters for Exploratory Testing
- Leverage documents for multiple purpose

Content Source - http://en.wikipedia.org/wiki/Agile_testing

In Lighter Moods

Testers and developers

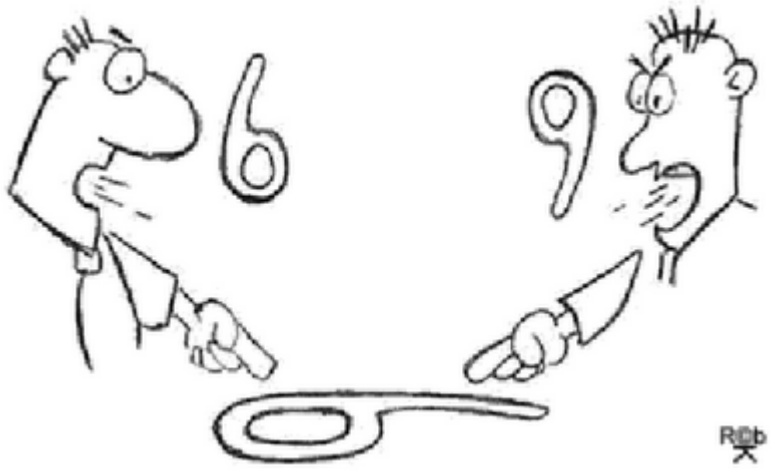
- Blurring the Line

By **Trish Khoo**

I'm a tester who used to be a developer. I find my developer skills to be very useful in my job as a tester.

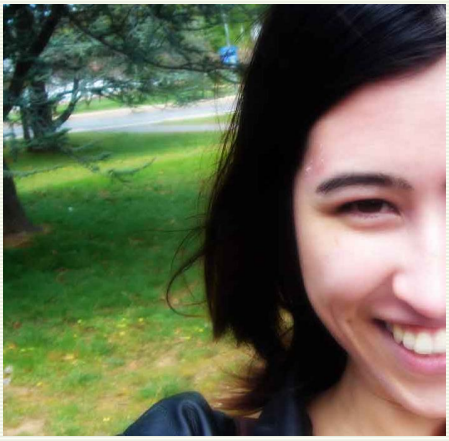
Knowing how to build software goes beyond just knowing how to code up a script. If a tester can understand how software fits together, then that tester will have a greater understanding of how to find points of failure. Not only that, but understanding **how** something went wrong can lead the tester to discover even greater risks to the system. If the tester's understanding of the system stops at the GUI level, then their exploratory testing path stops there too.

Understanding how different system components interact, and being able to program these components opens up possibilities for new kinds of tests. Very focused and powerful tests can be imagined and implemented this way.



Being able to communicate with developers at the same level as them is also extremely beneficial. It not only makes it easier for both parties to understand each other, but it fosters a mutual respect. Building software isn't easy, and knowing what's involved gives testers a greater appreciation for the developer's job. Developers respect testers who have taken the time to understand what they have built and how they have built it.

Working with software means that having programming skills gives the tester greater power over that software. Much of testing is about comparing system states. Being



Trish Khoo is a loquacious software tester hailing from Sydney, Australia. When not writing for her testing blog, Purple Box Testing, Trish can usually be found working as the Test Lead for Campaign Monitor.

She sometimes participates in the Software Testing Club forums and Weekend Testing for Australia and New Zealand.

At the moment, her main interests lie in automated testing, exploratory testing and test management.
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She can be reached at twitter
http://twitter.com/hogfish

able to query a database and directly call methods from code can give the tester greater control over the state of the system.

Even just having basic programming skills can be a big plus. Generating custom test data programmatically can be a huge time saver. Being able to modify an automated record and playback script to speed up a task can also save time. And then there is automation.
Being able to write code is not enough to be able to write good automated tests. Writing a good automated test suite is not a trivial exercise. Even seasoned developers can find it difficult if they don't know how to approach it. Writing automated tests is a skill that needs study devoted to it **on top** of learning to code.

My advice to manual testers: consider devoting some time learning how to build software. If coding doesn't appeal to you, then at least consider studying software architecture and design, which will help your understanding of how software components fit together and interact. These are skills that will be very useful to you. There is a great deal of work involved in learning these, but is worthwhile.

Twitter Mates – 5 Testers @ twitter

Michael Bolton

BIO: I solve testing problems that other people can't solve, and I teach people how they can do it too.
96 following,
1,652 followers
197 listed
http://twitter.com/michaelbolton

James Marcus Bach

BIO: Author of Secrets of a Buccaneer-Scholar, high school dropout, unschooling parent, philosopher, neo-pyrrhonian skeptic, software tester
71 following
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Vipul Kocher

BIO: Bhartiya, entrepreneur, Software Tester. Books, History, Movie, Food, ~Lover - TOO MANY INTERESTS, TOO FEW SKILLS
482 following
343 followers
17 listed
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Pradeep Soundararajan

BIO: Tester, Coach, Consultant, Speaker, Writer and more on Software Testing
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778 followers
86 listed
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uTest

BIO: uTest is the largest software testing marketplace & leader in crowdsourced software testing: 25,000+ testers in 160+ countries
1,501 following
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..... more testers in next issue.

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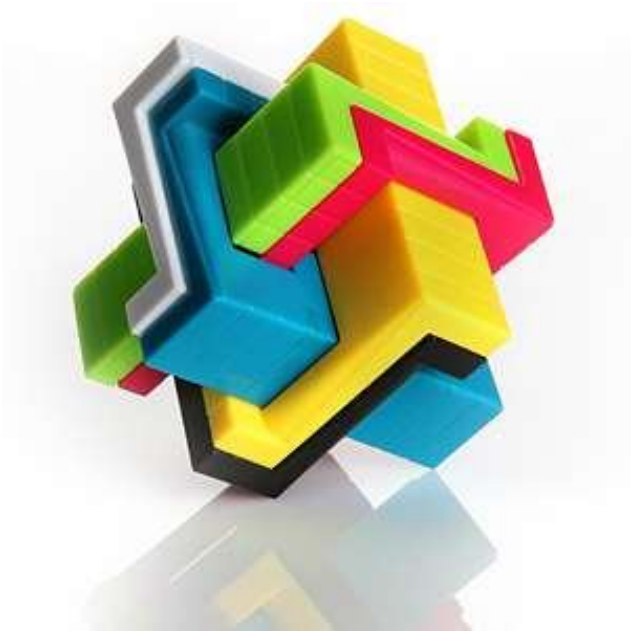
JAI HO TESTERS!

A note of appreciation from a developer

By **Nasim Ahmed**

I must introduce myself to get you to the context. I am a software developer in an IT firm. I have worked on Desktop application, services and web applications. As we all know in software development phases which start from requirement, analysis, designing, coding, testing and maintenance. All parts are extremely important and problem in any phases causes the failure of the software/application.



In theory, if we analyze a requirement well and design it properly, we code accurately then there should not be any problem. But in reality it is not true. Particularly in this age of deadlines we keep on doing things in hurry and we end up getting into a mess.

From developer's point of view the design is a challenge. Is the design feasible enough to work on? If it is, then coding part goes easy. Even then there is no guarantee that the software will be 100% defect free. So testing is an important part of the overall Software Development Life Cycle (SDLC). The testers are really the ones who save us from ending up with failure. In the all development phases, we focus on one part at a time and often an application consists of many modules and those are developed in parts which when integrated will result into a complete application.

A problem in one small unit can cause major regression issues in other part of the application. Let's take an example of an application which supposed to handle thousands and millions of transactions at a time. The developer writes a unit but in unit test it gets pass without a problem. But it may fail in real scenario .The test engineers test these scenarios which are not generally tried at developer's end. Not

Md.Nasim Ahmed is a Senior Software Engineer currently working in HCL Technologies, Noida. He has 4 years of experience in developing and maintaining various Windows and Web applications. He started his career as a software developer in Edisphere Pvt. Limited.

His hobby includes reading novels, motivational books, writing blogs and tracking technologies update.

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only they test the real scenario but test the tiny and smallest requirements which actually may cause a very big problem. From developer's point of view a code is working if it passes the scenario for which it was written and he/she never bothers for the unusual cases. Moreover, developers consider user as a real hero and assume that the users know how the software should be used. This is certainly a bad assumption. Luckily the test engineer saves us by testing all the conditions.

To be concise "**developers test to see the application working"** and "**the testers test it to see if it fails"**. For a developer, a tester is like a critic who will point out all the wrong things in the application. It hurts a lot as a developer. But at the end of the day, they are the people who keeps our clients happy by helping us deliver a nearly defect free application.

A piece of advice to budding testers -

- Do not report bugs just to increase the number.
- Do not blame developers, blame the code. Although blame does not fix defects.
- Help us understand the defect by writing good defect reports. Watch out your written and non-written communication skills.

test case practice

By **Naresh Bisht**

Requirement – A Pet Bottle

To generate and write test cases to a pet bottle.

(This test case document is just an indication of how to write test cases. The test steps are not exhaustive. The author believes that more test steps can be written for a pet bottle.)

Volume	1 Ltr (1.05 qt)
Colour	Transparent light green
Height	10.1 in (25.7 cm) tall
Diameter	3 in (7.6 cm) diameter at middle
Shape	Round
Weight	1.45 oz (41 g)

Sr. No.	Steps to Execute	Expected Result	Actual Result*	Remarks
1	Measure the Volume of bottle	1 ltr (1.05 qt) bottle		
2	Examine the Colour of Bottle	Should be transparent and light green in colour		
3	Measure the Height of bottle	10.1 in (25.7 cm) tall		
4	Check shape of bottle	Round Shape		
5	Measure the Diameter of bottle			
	At the Top	1/4 in (3.2 cm) diameter		
	At the Middle	3 in (7.6 cm) diameter		
	At the Bottom	3 in (7.6 cm) diameter		
6	Weigh the Empty bottle	1.45 oz (41 g)		
7	Check the surface finish of outside and inside the bottle	Bottle should be smooth at both sides		
8	Check the tightness of the bottle cap	Cap should be sealed and should be airtight		
9	Examine the rotation of cap clockwise/anti-clockwise	Clockwise should close the bottle cap, Anti-clockwise should open the cap		
10	Check for Leakage	Bottle should not leak when the bottle is filled with liquid (water).		

Sr. No.	Steps to Execute	Expected Result	Actual Result*	Remarks
11	Check the ability to withstand heat (50 C Degree)	The material used should be able to withstand heat		
12	Check the ability to withstand cold (Zero C Degree)	The material used should be able to withstand cold		
13	Check the Base of the bottle	The bottle base should be flat		
14	Check the stability of bottle	Should be stable when empty or full		
15	Check the grip of bottle	Easy to hold and non-slippery even when wet		
16	Check the Label of bottle	Label should be pasted on outside the bottle and it should have all the information about the brand of the bottle manufacturer – Logo, Price tag, manufacturing date, manufacturer name etc.		
17	Smell the empty bottle	The bottle should be smell free		
18	Check the type of plastic used for the bottle	It should be thermo plastic (recyclable)		

**Actual Results are written when you get to test the actual bottle.*

In this section we will practice to write test cases on various items, objects and applications. We do not claim that test cases written here are exhaustive. It is just to give ideas to testers, beginners on how to approach for writing test cases. Readers are encouraged to share their views on the test cases. We would love to publish the opinions in the next issue.
- Editor

Software Testing Quote -
"To find the bugs that customers see - that are important to customers - you need to write tests that cross functional areas by mimicking typical user tasks. This type of testing is called scenario testing, task-based testing, or use-case testing." (Brian Marick)

Naresh Bisht has 3 years experience in Software Testing. He is currently employed with HCL Technologies, Gurgaon. He loves reading books, watching sci-fi movies. Naresh can be reached at http://twitter.com/Naresh_Bisht

Software Testing

TalentSprint and Thinksoft Global launch financial software testing certification program

To benefit fresh graduates TalentSprint and Thinksoft Global have announced a strategic partnership to launch professional programs in the area of structured testing of financial software. These programs are designed to benefit fresh college graduates from diverse backgrounds to become industry ready CFST (Certified Financial Software Testing) professionals and start a career at Thinksoft. The program involves an industrial curriculum that includes experiential learning, internship, and certification. The professional programs will be managed by TalentSprint.

AppLabs looks at buyout in US for around $50 mn

AppLabs, the world's largest independent software testing quality management company, which has its global delivery centre in Hyderabad, is planning to acquire a US-based company for about $50 million (approximately Rs 235 crore), according to its founder and chairman Sashi Reddi. "The move is primarily targeted at acquiring talent pool in a short while, going back to the old challenges. One significant acquisition in the US can help us plug a key requirement (workforce) for the company," he told Business Standard, while declining to draw any time line for closing the deal.

AppLabs had earlier acquired three companies — KeyLabs for $7 million in 2005, IS Integration for $37 million in 2006 and Hyderabad-based ValueMinds for an undisclosed sum in August 2010. The over $100-million company, has raised $17 million from global venture capital funds such as Sequoia Capital and Silicon Valley Bank to fund these buyouts. "The proposed acquisition will be funded through internal accruals and debt from banks and large private equity players," Reddi said. AppLabs presently employs a little over 2,000 globally, of which 1,650 work out of its Hyderabad centre. Reddi said the debt-free company was expanding its presence in Hyderabad and was taking more space at the DLF special economic zone here at a cost of Rs 12 crore.

"I can picture that we can add probably more than 1,000 people in the next 12 months," he said, adding the new facility would be fully operational by the end of this December. Reddi said there was a change in the mix of people that the company was taking because of the bigger companies that it was currently working with. The new recruitment at AppLabs, will include 60 per cent freshers and the rest laterals.

Stating that the global software testing market was estimated to be $6 billion and growing at a rate of 20 per cent, which is far higher than the growth of the general IT services market, he said the growth could be achieved if the testing moves from in-house to outside. "But where is it going is the question, whether it is going to big

systems integrators, specialised firms like AppLabs or testing tools vendors. In this space, we are seeing a strong growth in the US, with the geography contributing two-thirds to our revenues," he said, adding that when the company competed now for business, it was always against Tier-I players IBM or Cognizant.

Leading Market Research Firm Positions Cognizant as a Leader in Global Testing Services

Cognizant, a leading provider of consulting, technology, and business process outsourcing services, has been ranked a leader in enterprise application testing services in an IDC MarketScape analysis of 13 global third-party testing firms.

"IDC views Cognizant as one of the leading players with major market momentum that is helping drive efficient process and workflow into its global testing services practice," according to "IDC MarketScape: Global Testing Services, 2010 Vendor Analysis" by Rona Shuchat, Mukesh Dialani, and Melinda-Carol Ballou.

"Cognizant has been growing at an accelerated pace in testing services as well as across its ADM service lines," the report says. "A key part of Cognizant's approach is to adapt to the QA maturity level of its clients, engaging systematically to find ways to reduce inefficiencies and waste, in turn supporting redirection of investment toward business priorities. To this end, Cognizant works at creating client communities, sharing best practices in how to overcome internal customer challenges."

"Its testing practice is aligned with industries of specialization - such as financial services, healthcare, manufacturing/retail, telecommunications, and media and entertainment. This vertical alignment parallels its broader vertical sales strategy, enabling it to leverage its domain expertise and domain-aligned testing model," says the report. "As a result of its deep and focused solution content, Cognizant 2.0 process orchestration framework, and go-to-market strategy, Cognizant ranks in the leadership quadrant in our IDC enterprise application services assessment, for both discrete and embedded views."

"We are delighted to be recognized as a leader in IDC MarketScape's comprehensive global survey," said Sumithra Gomatam, Senior Vice President and Global Head of Cognizant's Testing Practice. "At a time when our clients are facing increasing economic, industry, and technology shifts, we have focused our global testing team on helping our clients champion software quality and, in the process, build more effective businesses.

"Our highly experienced testers, consulting expertise, and robust testing processes, methodologies, tools, and frameworks help us enhance testing efficiency and precision, reduce costs, decrease cycle times, and provide our clients with superior software quality," Sumithra added. "Thanks to our expertise on both the business and technical sides of testing, we have been able to create enterprise-wide managed test centers and expand our service portfolios to related areas such as test environment management and cloud-based testing."

Sources – Google News and various internet news portals.

Test Your Testing Knowledge
Commonly Asked Questions in Interview

1) The word 'bug' is synonymous with which of the following words?
A. Incident
B. Defect
C. Mistake
D. Error

2) A risk relates to which of the following?
A. Negative feedback to the tester.
B. Negative consequences that will occur.
C. Negative consequences that could occur.
D. Negative consequences for the test object.

3) Which is not a type of review?
A. Walkthrough
B. Inspection
C. Informal review
D. Management approval

4) A test team consistently finds between 90% and 95% of the defects present in the system under test. While the test manager understands that this is a good defect-detection percentage for her test team and industry, senior management and executives remain disappointed in the test group, saying that the test team misses too many bugs. Given that the users are generally happy with the system and that the failures which have occurred have generally been low impact, which of the following testing principles is most likely to help the test manager explain to these managers and executives why some defects are likely to be missed?
A. Exhaustive testing is impossible
B. Defect clustering
C. Pesticide paradox
D. Absence-of-errors fallacy

5) Why are error guessing and exploratory testing good to do?
A. They can find defects missed by specification-based and structure-based techniques.
B. They don't require any training to be as effective as formal techniques.
C. They can be used most effectively when there are good specifications.
D. They will ensure that all of the code or system is tested

6) How do experience-based techniques differ from specification-based techniques?
A. They depend on the tester's understanding of the way the system is structured rather than on a documented record of what the system should do.
B. They depend on having older testers rather than younger testers.
C. They depend on a documented record of what the system should do rather than on an individual's personal view.
D. They depend on an individual's personal view rather than on a documented record of what the system should do.

7) Which of the following statements about the relationship between statement coverage and decision coverage is correct?
A. 100% decision coverage is achieved if statement coverage is greater than 90%.
B. 100% statement coverage is achieved if decision coverage is greater than 90%.
C. 100% decision coverage always means 100% statement coverage.
D. 100% statement coverage always means 100% decision coverage.

8) Use case testing is useful for which of the following?
P. Designing acceptance tests with users or customers.
Q. Making sure that the mainstream business processes are tested.
R. Finding defects in the interaction between components.
S. Identifying the maximum and minimum values for every input field.
T. Identifying the percentage of statements exercised by a set of tests.
A. P, Q and R
B. Q, S and T
C. P, Q and S
D. R, S and T

9) Postal rates for 'light letters' are 25p up to 10g, 35p up to 50g plus an extra 10p for each additional 25g up to 100g. Which test inputs (in grams) would be selected using equivalence partitioning?
A. 8, 42, 82, 102
B. 4, 15, 65, 92, 159
C. 10, 50, 75, 100
D. 5, 20, 40, 60, 80

10) Which of the following could be used to assess the coverage achieved for specification based (black-box) test techniques?
V. Decision outcomes exercised
W. Partitions exercised
X. Boundaries exercised
Y. State transitions exercised
Z. Statements exercised
A. Y, W, Y, or Z
B. W, X or Y
C. V, X or Z
D. W, X, Y or Z

Solution:

1) B

2) C

3) D

4) A

5) A

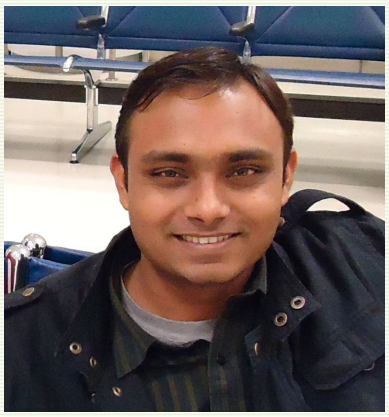
6) D

7) C

8) A

9) B

10) B



Jaijeet Pandey has over 5 years of experience in Application Development, Maintenance and Testing. From more than last 3 years he is involved in automation testing with QTP and Load Runner tools. He also teaches QTP on weekends. He is currently employed with Birlasoft, Noida. In his leisure time he loves reading technical and non-technical books. He can be reached at http://twitter.com/jaijeetpandey

QuickTest Professional — Code Corner

By Jaijeet Pandey

Problem:

Click the link "Delhi Metro Rail Corporation" available in webtable on Indian railways website. You are not aware which cell contains the desired link. You have to search the link and click the same within the web table.

Zonal Railways	Production Unit	Corporate Sites	Others
Central Railway	Chittaranjan Loco Works	Centre for Railway Information Systems	Railway Board
East Central Railway	Diesel Locomotive Works	Container Corporation of India Limited	Metro Railway,Kolkata
East Coast Railway	Diesel-Loco Modernisation Works	IRCON International Limited	Indian Railway E-Procurement
Eastern Railway	Integral Coach Factory	Indian Railway Catering and Tourism Corporation Limited	National Train Enquiry System
North Central	Northern Railway Carriage and wagon Workshop Lucknow	Indian Railway Finance Corporation	Central Organization for Railway Electrification
North Eastern Railway	Rail Coach Factory	Indian Railway Welfare Organisation	Darjeeling Himalayan Railway
North Western	Rail Wheel Factory	Konkan Railway Corporation's	Indian Railway Central Organization for Telecom
Northeast Frontier Railways	**Educational & Research Websites**	Mumbai Railway Vikas Corporation	National Rail Museum Sites
Northern Railway	Railway Staff College Vadodra	Rail Vikas Nigam Limited	Indian Railway Traffic Service Association(IRTS)
South Central Railway	Indian Railway Institute Of Transport Management(IRITM)	RAILTEL Corporation of India Limited	Palace on Wheels
South East Central Railway	Indian Railway Institute Of Signal Engineering and Telecommunications (IRISET)	RITES Limited	Railway Board Claims website
South Eastern Railway	Indian Railways Institute of Electrical Engineering(IRIEEN)	Institute of Rail Transport	Rail Tourism
South Western	Indian Railways Institute of Mechanical and Electrical Engineering(IRIMEE)		Delhi Metro Rail Corporation

Solution:

Here is the QTP code to solve your problem.

```
row=Browser("Welcome to Indian Railway").Page("Welcome to Indian Railway").WebTable("Zonal
Railways").GetRowWithCellText("Delhi Metro Rail Corporation")
col= Browser("Welcome to Indian Railway").Page("Welcome to Indian Railway").WebTable("Zonal Railways").ColumnCount(row)
For ctr=1 to col step 1
        txt= Browser("Welcome to Indian Railway").Page("Welcome to Indian Railway").WebTable("Zonal
Railways").GetCellData(row,ctr)
  If strcomp(trim(txt),"Delhi Metro Rail Corporation",1)=0 Then
         Set MetroLink=Browser("Welcome to Indian Railway").Page("Welcome to Indian Railway").WebTable("Zonal
Railways").ChildItem(row,ctr,"Link",0)
                MetroLink.click
                Exit for
        End If
Next
```

.Know Your Testing Guru.

Interview with **Vipul Kocher**

*Name – **Vipul Kocher***
Organization – PureTesting
Role/Designation – Co-founder and Co-President
Location – NOIDA, Bangalore, UK, USA

***Vipul Kocher** is a person with deep and passionate interest in software testing which also happens to be his profession. His other areas of interests are Science Fiction, Archaeology, History of Ancient Bharat, Religions. In his own words – Too many interests, too few skills.*

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http://vipulkocher.blogspot.com

Twitter URL –
http://twitter.com/vipulkocher

In this section, we will publish interview with Software Testing professionals in every issue. In this issue Vipul Kocher has shared his ideas about software testing and how he sees future of software testing. – Editor

Q: How long have you been associated with software testing?
A: Fifteen years

Q: How did you become a software tester?
A: From being a developer to a tester was a short Journey. I had finished my development tasks, the product was to be released and my company needed somebody who was available to do testing. I was a person at right time. That I was right person had nothing to do with it.

Q: By any means, do you regret being associated with software testing?
A: Only to the extent that I see lot less number of testers who are on a focussed learning path as compared to those who just don't care about improving their testing knowledge.

Q: Do you think software testing is less respected than other departments in IT industry?
A: It depends on the organization. For the organizations I have worked with, they valued their testers at par with other departments esp. development and valued the opinions of testers even more than developers. I have also heard of organizations which are ignorant of the value testing and testers bring.

Q: What will you suggest to people who want to join IT industry as software testers?
A: My suggestion is that they should polish some of their skills such as communication, analytical and logical thinking skills and they should

improve their knowledge of computers, operating systems, programming languages etc. While it is not necessary, it is highly desirable.
Developing an attitude of enquiry is very important as most important skill required in testing is the skill of questioning.

Q: Where do you see software testing in next five years?
A: Where I see it today. Necessary, important and still misunderstood.

Q: What qualities will you look for in a candidate when you want to recruit someone for software testing job?
A: A questioning mind not easily satisfied with "authoritative" answers, an eye for details and most important of all, a will to excel.

Q: Your weekend routine?
A: No difference between weekends and weekdays most of the time. It is work, pleasure, reading a lot and a little bit of thinking. I need to reverse that – more thinking and less reading.

Q: Movie you would like to watch again?
A: There is no liking part there. If I like, I watch it. So I have no list of what I would want to watch. As far as liking is concerned I am big on Action, Science Fiction, Comedy – Hollywood as well as Indian movies (including Tamil and Telugu movies with subtitles)

Q: "I am a social networking site geek" Or "I hate facebook /orkut / twitter"?
A: I am not really a geek there. I use Twitter often and Facebook some times. I use phone and email a lot more to be connected with my friends. I hardly blog.

From the next issue onwards we will publish mails, feedbacks, complaints, wishes sent to editorial board. Please send us what you feel about this magazine.

You can send your emails to

Contributors – Testing Circus Champions

The first edition of the "**Testing Circus**" is being published with help from number of professionals who are working in Software Testing field. We would like to thank all the contributors who shaped up this magazine. We got overwhelming responses to our initial campaign to publish this magazine. However, we need more support to continue to publish this magazine. Here is how you can associate with this mission. We need people in three categories.

- **Content Author** - You can contribute original article written on software testing. A group of testing professionals will review the content and approve for publishing in the e-magazine.
- **Campaign Champion** - You can also become a campaign champion by informing about this e-magazine to the testing community.
- **Tech Team** - You can help us managing the technical aspects of creating the e-magazine, maintaining subscriber base and helping on us on websites etc.

Simply write a mail to editor@testingcircus.com mentioning your willingness to work with us.

We would like to thank **Jaijeet Pandey**, **Kumar Gaurav**, **Trish Khoo**, **Nasim Ahmed**, **Naresh Bisht** for contributing content for this magazine. We also thankful to **Ish Chand Tripathi** for helping us in campaign activities, **Anuj Batta** for blogging about Testing Circus in his blog. Special thanks to **C. Nellai Sankar** for providing inputs on test case section. There are lots of people who encouraged us to launch this magazine. We approached lots of people for helping us. Some helped, some refused, some never replied. But we are thankful to all of them too.

Our special thanks to **Mr. Vipul Kocher**, President – Indian Testing Board for giving us guidance and allowing us to publish his interview in this issue.

Last but not the least. **Ajoy Kumar Singha** – Founder and Editor of this magazine would like to thank his wife and son who sacrificed their personal time and attention and helped him work on this magazine – mostly late nights.

NEXT...

Send in your articles for our next issue to the editor@testingcircus.com

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